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7590

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EXAMINER

CHOW, DOON Y

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 11/30/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/648,153

Applicant(s)

KOYAMA, JUN

Examiner

Dennis-Doon Chow

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2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claims 4, and 6-46 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification **does not provide support** for follow subject matters:

“an AC voltage having an amplitude equivalent to that of the voltages output of the memory circuit is supplied to the opposite electrode”, in claims 7 and 23, or “an alternating voltage”, in claims 34 and 36;

*Fig. 8* “each inverter comprising one p-channel type thin film transistor and one n-channel type thin file transistor”, in claims 30, 32, 34, 36, 37, and 39. The specification, at column 4, lines 62, only discloses “it is possible that a polarity of a TFT in a pixel matrix portion is only one type that is, a P-channel type or an N-channel type”, not the features as claimed;

*O K* “at least two signal lines electrically connected to said memory circuit and the corresponding pixel electrode”, in claims 6, 12, 18, and 24. If applicant intended refer the at least two signal lines as the lines 803 and 804 in Fig. 8 or 903 and 904 in Fig. 9, these lines are not connect to any pixel electrode, they are connected to the memory only ;

*O K* “wherein different voltages are applied to said pixel electrode through said at least two signal lines based on the information stored by the corresponding memory circuit”, in claims 6, 12, 18, and 24;

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OK "one of source or drain of the second thin film transistor ... said electro-optical modulating layer" (from "one of source or drain of the second thin film transistor" to the end of the claim), in claim 12. Neither Fig. 8 nor Fig. 9 in the drawings show these features; and having both a time gradation display device and a digital gradation display device in the same liquid crystal display device, in claim 4 (see the last paragraph of claim 1 and claim 4).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3 Claims 1-11, and 18-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks (5471225) in view of Johary et al. (5196839).

Parks discloses a liquid crystal display device comprising a first and second substrates, a liquid crystal disposed between the first and second substrates; at least one memory circuit connecting to a thin film transistor and a pixel electrode; wherein the memory circuit has a first and inverters (col. 6, lines 53-56) which includes a first and second thin film transistors.

Parks does not explicitly disclose generating gradation signals include different voltages, which can be applied to pixels.

Johary discloses a display device for generating time gradation signals or digital gradation signals (Fig. 1) which include different voltages.


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Therefore, it would have been obvious to one of ordinary skill in the art to use Johary's generating means in the Parks' invention so that gradation images can be generated in Parks' display device.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis-Doon Chow whose telephone number is 703-305-4398.

D. Chow

November 26, 2001

  
DENNIS-DOON CHOW  
PRIMARY EXAMINER